

## Amendments to the Specification

1. The previous abstract was replaced with a new abstract.
2. In paragraph [0005], the misspelled word “waveguids” was corrected to “waveguides”.
3. In paragraph [0005], the misspelled word “[die]” was corrected to “dye”.
4. In paragraph [0005], the word “and” was added.
5. In paragraph [0006], the multi-word “pseude band gap” was replaced with “stopgap”.
6. In paragraph [0007], the misspelled word “[die]” was corrected to “dye”.
7. In paragraph [0008], the “fluoride” was replaced with “fluorine”.
8. In paragraph [0008], “[and]” was replaced with “or”.
9. In paragraph [0012], the sentences “~~The infiltration and densification steps were repeated for 10 times to fill most of the voids inside the silica. The titania-silica~~

~~composite film on substrate produced in the preceding steps was immersed in a warm template.~~” were moved to the beginning of paragraph number [0013].

10. In paragraph [0016], the misspelled word “[[deep]]” was corrected to “dip”.
11. In paragraph [0018], the word “[[or]]” was deleted.
12. In paragraph [0018], the words “silicon wafer, quartz, or mica” were added.
13. In paragraph [0019], the word “~~Faleon~~” was deleted.
14. In paragraph [0019], the words “titanium(iv) butoxide, titanium(iv) tert-butoxide, titanium(iv) methoxide, or titanium(iv) propoxide” were added.
15. In paragraph [0019], the words “on a substrate” were added.
16. In paragraph [0019], the word “~~Faleon~~” was deleted and replaced with “centrifuge”.
17. In paragraph [0020], the sentence “~~Basically, the smaller the machine is the faster it should turn to produce same gravitational effect. And it was kept turning for 30 to 60 minutes~~” was deleted.

18. In paragraph [0021], the word “~~Faleon~~” was deleted and replaced with “~~centrifuge~~”.
19. In paragraph [0022], the word “[~~band~~]” was deleted and replaced with “gap”.
20. In paragraph [0022], the word “~~absorption~~” was deleted and replaced with “UV-Vis”.
21. In paragraph [0023], the word “[~~band~~]” was deleted and replaced with “gap”.
22. In paragraph [0029], the word “and” was added.
23. In paragraph [0032], the words “silicon wafer, quartz, or mica” were added.
24. In paragraph [0037], the word “facilitates” was added.
25. In paragraph [0038], the word “~~absorption~~” was deleted and replaced with “UV-Vis”.
26. In paragraph [0040], the word “~~absorption~~” was deleted and replaced with “UV-Vis”.

27. In paragraph [0040], the multi-word “~~pseudo band gap~~” was replaced with  
“stopgap”.

28. In paragraph [0040], the multi-word “photonic crystal” was added.